# Chemical/Biological Terrorism
# January 2003

1: Am J Bioeth 2002 Summer;2(3):41-2
Comment on:Am J Bioeth. 2002 Summer;2(3):29-39.
The Cipro patent and bioterrorism.
Kaye KS, Kaye D.
Duke University Medical Center.
Publication Types:Comment
PMID: 12230854 [PubMed - indexed for MEDLINE]

2: Am J Bioeth 2002 Summer;2(3):29-39
Comment in:Am J Bioeth. 2002 Summer;2(3):40.
Am J Bioeth. 2002 Summer;2(3):41-2.
Am J Bioeth. 2002 Summer;2(3):42-3.
Am J Bioeth. 2002 Summer;2(3):43-4.
Am J Bioeth. 2002 Summer;2(3):45-6.
Am J Bioeth. 2002 Summer;2(3):46-8.
Am J Bioeth. 2002 Summer;2(3):48-9.
Am J Bioeth. 2002 Summer;2(3):50-1.
Am J Bioeth. 2002 Summer;2(3):51-2.
Bioterrorism and patent rights: "compulsory licensure" and the case of Cipro.
Resnik DB, De Ville KA.
East Carolina University.
PMID: 12230852 [PubMed - indexed for MEDLINE]

3: Anaesthesia 2002 Nov;57(11):1067-82
Deliberate release of biological agents.
Sardesai AM, Brown NM, Menon DK.
Division of Anaesthesia, University of Cambridge, Box 93, Addenbrooke's Hospital, Cambridge CB2 2QQ, UK. Sardesai1@aol.com
Deliberate release of biological agents is a growing threat, but clinical recognition of the resulting diseases is hampered by their rarity and similar presentation to more common illnesses. Despite substantial publicity, access to information may be difficult. Further, the available data are fragmented and not always relevant to critical care settings. We describe the clinical presentations of some important infections, highlighting the features that are relevant to critically ill patients. We provide an integrated set of guidelines for diagnosis, patient care and infection control and have attempted to list important print- and web-based resources for further information.
Publication Types: Review, Review, Tutorial
PMID: 12392454 [PubMed - indexed for MEDLINE]

4: Ann Pharmacother 2003 Jan;37(1):132-5
Bioterrorism web sites for pharmacists.
Misita CP, Boosinger AB, Kendrach MG.
Caron P Misita, PharmD Student, McWhorter School of Pharmacy, Samford University, Birmingham, AL.
OBJECTIVE: To identify Internet Web sites for ease of accessibility to bioterrorism-related information, comprehensive provision of
bioterrorism-related information, and provision of bioterrorism information that specifically pertains to the pharmacy profession.
DATA SOURCES: Web sites of national pharmacy organizations, US government agencies, and medical organizations, as well as Web sites related to bioterrorism.
DATA SYNTHESIS: Pharmacists need access to relevant bioterrorism information in a timely manner. An evaluation of Web sites was performed to identify those that include a discussion of the potential infectious microorganisms and prevention and treatment methods, as well as unique features for pharmacy practice. RESULTS: The American Society of Health-System Pharmacists and American Pharmaceutical Association Web sites provide pharmacy-specific recommendations. The Centers for Disease Control and Prevention provides biological agent information and health department contact numbers. Additional agent-specific data are provided by the American Medical Association, The Johns Hopkins University, and the Food and Drug Administration (FDA) Web sites. Information addressing food safety is provided by the FDA. CONCLUSIONS: Pharmacy-specific bioterrorism information is available only at selected national pharmacy organization Internet Web sites. However, other Web sites provide comprehensive bioterrorism information useful for pharmacists.
PMID: 12503948 [PubMed - in process]

5: Aviat Space Environ Med 2002 Jul;73(7):665-72
Heat strain reduction by ice-based and vapor compression liquid cooling systems with a toxic agent protective uniform.
Cadarette BS, Levine L, Kolka MA, Proulx GN, Correa MM, Sawka MN.
U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760, USA. bruce.cadarette@na.amedd.army.mil
BACKGROUND: The purpose of this study was to compare a vapor compression microclimate cooling system (MCC) and a personal ice cooling system (PIC) for their effectiveness in reducing physiological strain when used with cooling garments worn under the impermeable self-contained toxic environment protective outfit (STEPO). A second comparison was done between the use of total body (TOTAL) and hooded shirt-only (SHIRT) cooling garments with both the MCC and PIC systems. It was hypothesized that the cooling systems would be equally effective, and total body cooling would allow 4 h of physical work in the heat while wearing STEPO.
METHODS: Eight subjects (six men, two women) attempted four experiments at 38 degrees C (100 degrees F), 30% rh, 0.9 m x sec(-1) wind, while wearing the STEPO. Subjects attempted 4 h of treadmill walking (rest/exercise cycles of 10/20 min) at a time-weighted metabolic rate of 303 +/- 50 W. RESULTS: Exposure time was not different between MCC and PIC, but exposure time was greater with TOTAL (131 +/- 66 min) than with SHIRT (83 +/- 27 min) for both cooling systems ($p < 0.05$). Cooling rate was not different between MCC and PIC,
but cooling rate while wearing TOTAL (362 +/- 52 W) was greater than with SHIRT (281 +/- 48 W) ($p < 0.05$). Average heat storage was lower with MCC (39 +/- 20 W x m(-2)) than with PIC (50 +/- 17 W x m(-2)) in both TOTAL and SHIRT ($p < 0.05$). Also, average heat storage while wearing TOTAL (34 +/- 19 W x m(-2)) was less than with SHIRT (55 +/- 13 W x m(-2)) for both cooling systems ($p < 0.05$). The

Physiological Strain Index (PSI) was lower in MCC-TOTAL (2.4) than MCC-SHIRT (3.7), PIC-SHIRT (3.8), and PIC-TOTAL (3.3) after 45 min of heat exposure ($p < 0.05$). CONCLUSIONS: Total body circulating liquid cooling was more effective than shirt-only cooling under the impermeable STEPO uniform, providing a greater cooling rate, allowing longer exposure time, and reducing the rate of heat storage. The MCC and PIC systems were equally effective during heat exposure, but neither system could extend exposure for the 4 h targeted time.
Publication Types: Clinical Trial; Controlled Clinical Trial
PMID: 12137102 [PubMed - indexed for MEDLINE]

6: Cell Biol Toxicol 2002;18(3):175-80
Suppression of sulfur mustard-increased IL-8 in human keratinocyte cell cultures by serine protease inhibitors: implications for toxicity and medical countermeasures.
Cowan FM, Broomfield CA, Smith WJ.
Biochemical Pharmacology Branch, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen Proving Ground, Maryland 21010-5400, USA.
The toxicity of the chemical warfare blistering agent sulfur mustard (2,2'-dichlorodiethyl sulfide; SM) has been investigated for nearly a century; however, the toxicological mechanisms of SM remain obscure and no antidote exists. The similarity of dermal-epidermal separation caused by SM exposure, proteolysis, and certain bullous diseases has fostered the hypothesis that SM vesication involves proteolysis and/or inflammation. Compound screening conducted by the US Army Medical Research Institute of Chemical Defense established that topical application of three tested serine protease inhibitors could reduce SM toxicity in the mouse ear vesicant model. Although most of the drugs with efficacy for SM toxicity in rodent models are anti-inflammatory compounds, no in vitro assay is in current use for screening of potential anti-inflammatory SM antidotes. IL-8 is a potent neutrophil chemotactic cytokine that is increased in human epidermal keratinocyte (HEK) cell cultures following exposure to SM and has been proposed as a marker for SM-induced inflammation. This study was conducted to establish in vitro screening of IL-8 in SM-exposed HEK as a possible model for evaluating candidate compounds prior to in vivo testing. We chose two protease inhibitors, one from those shown as successful in the MEVM (ethyl p-guanidinobenzoate hydrochloride, ICD 1579) and a prototypic inhibitor of trypsin, N-tosyl-L-lysine chloromethyl ketone (TLCK). TLCK (62.5 to 1000 micromol/L) or ICD 1579 (31.25 to 1000 micromol/L) was added to HEK cell cultures 1 h after SM exposure (200 micromol/L) and dose-dependently suppressed SM-increased IL-8. The suppression of SM-increased IL-8 by a class of drug candidate compounds such as protease inhibitors may provide a mechanistic marker that helps predict future medical countermeasures for SM toxicity and reduces the need for testing in animal models.
PMID: 12083423 [PubMed - indexed for MEDLINE]

7: CMAJ 2002 Nov 26;167(11):1281
Bioterrorism becoming too dominant on public health agenda?
Cassels A.
Publication Types: News
PMID: 12451101 [PubMed - indexed for MEDLINE]

8: Crit Care Nurse 2002 Oct;22(5):21-32, 34; quiz 35-6
Anthrax as a biological weapon: an old disease that poses a new threat.
Tasota FJ, Henker RA, Hoffman LA.
Department of Acute/Tertiary Care, University of Pittsburgh School of Nursing,Pittsburgh, Pa., USA.

Publication Types: Review; Review, Tutorial
PMID: 12382615 [PubMed - indexed for MEDLINE]

9: Curr Opin Biotechnol 2002 Jun;13(3):208-12
Potential applications of DNA microarrays in biodefense-related diagnostics.
Stenger DA, Andreadis JD, Vora GJ, Pancrazio JJ.
Center for Bio/Molecular Science and Engineering, Code 6910, Naval Research Laboratory, Washington, DC 20375, USA. dstenger@ccs.nrl.navy.mil
Recent years have witnessed a logarithmic growth in the number of applications involving DNA microarrays. Extrapolation of their use for infectious diagnostics and biodefense-related diagnostics seems obvious. Nevertheless, the application of DNA microarrays to biodefense-related diagnostics will depend on solving a set of substantial, yet approachable, technical and logistical problems that encompass diverse topics from amplification efficiency to bioinformatics.
Publication Types: Review; Review, Tutorial
PMID: 12180094 [PubMed - indexed for MEDLINE]

10: Dis Mon 2002 Aug;48(8):493-564
Biological terrorism: understanding the threat, preparation, and medical response.
Franz DR, Zajtchuk R.
Chemical and Biological Defense Division, Southern Research Institute, Frederick, Maryland, USA.
The thought of an outbreak of disease caused by the intentional release of a pathogen or toxin in an American city was alien just 10 years ago. Many people believed that biological warfare was only in the military's imagination, perhaps to be faced by soldiers on a far-away battlefield, if at all. The "anthrax letters" and the resulting deaths from inhalation anthrax have changed that perception. The national, state, and local governments in the United States are preparing for what is now called "not if, but when and how extensive" biological terrorism. In contrast to the acute onset and first-responder focus with a chemical attack, in a bioterrorist attack, the physician and the hospital will be at the center of the fray. Whether the attack is a hoax, a small food-borne outbreak, a lethal aerosol cloud moving silently through a city at night, or the introduction of contagious disease, the physician who understands threat agent characteristics and diagnostic and treatment options and who thinks like an epidemiologist will have the greatest success in limiting the impact of the attack. As individual health care providers, we must add the exotic agents to our diagnostic differentials. Hospital administrators must consider augmenting diagnostic capabilities and surveillance programs and even making infrastructure modifications in preparation for the treatment of victims of bioterrorism. Above all, we must all educate ourselves. If done correctly, preparation for a biological attack will be as "dual use" as the facility that produced the weapon. A sound public health infrastructure, which includes all of us and our resources, will serve this nation well for the control of the disease, no matter what the cause of the disease.
Publication Types:Review; Review, Tutorial
PMID: 12429949 [PubMed - indexed for MEDLINE]

11: Emerg Infect Dis 2002 Oct;8(10):1039-43
Opening a bacillus anthracis-containing envelope, Capitol Hill, Washington, D.C.: the public health response.
Hsu VP, Lukacs SL, Handzel T, Hayslett J, Harper S, Hales T, Semenova VA, Romero-Steiner S, Elie C, Quinn CP, Khabbaz R, Khan AS, Martin G, Eisold J, Schuchat A, Hajjeh RA.
Centers for Disease Control and Prevention, Atlanta, GA 30333, USA. vhsu@cdc.gov

On October 15, 2001, a U.S. Senate staff member opened an envelope containing Bacillus anthracis spores. Chemoprophylaxis was promptly initiated and nasal swabs obtained for all persons in the immediate area. An epidemiologic investigation was conducted to define exposure areas and identify persons who should receive prolonged chemoprophylaxis, based on their exposure risk. Persons immediately exposed to B. anthracis spores were interviewed; records were reviewed to identify additional persons in this area. Persons with positive nasal swabs had repeat swabs and serial serologic evaluation to measure
antibodies to B. anthracis protective antigen (anti-PA). A total of 625 persons were identified as requiring prolonged chemoprophylaxis; 28 had positive nasal swabs. Repeat nasal swabs were negative at 7 days; none had developed anti-PA antibodies by 42 days after exposure. Early nasal swab testing is a useful epidemiologic tool to assess risk of exposure to aerosolized B. anthracis. Early, wide chemoprophylaxis may have averted an outbreak of anthrax in this population.
PMID: 12396912 [PubMed - indexed for MEDLINE]

12: Emerg Infect Dis 2002 Oct;8(10):1013-4
Anthrax bioterrorism: lessons learned and future directions.
Hughes JM, Gerberding JL.
National Center for Infectious Disease, Centers for Disease Control and Prevention, Atlanta, GA, USA.
PMID: 12396907 [PubMed - indexed for MEDLINE]

13: Emerg Infect Dis 2002 Oct;8(10):1015-8
Public health in the time of bioterrorism.
Perkins BA, Popovic T, Yeskey K.
Centers for Disease Control and Prevention, Atlanta, GA, USA.
PMID: 12396908 [PubMed - indexed for MEDLINE]

14: Emerg Infect Dis 2002 Oct;8(10):1073-7
Surveillance for anthrax cases associated with contaminated letters, New Jersey, Delaware, and Pennsylvania, 2001.
Tan CG, Sandhu HS, Crawford DC, Redd SC, Beach MJ, Buehler JW, Bresnitz EA, Pinner RW, Bell BP; Regional Anthrax Surveillance Team.; Centers for Disease Control and Prevention New Jersey Anthrax Surveillance Team.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA. christina.tan@doh.state.nj.us
In October 2001, two inhalational anthrax and four cutaneous anthrax cases, resulting from the processing of Bacillus anthracis-containing envelopes at a New Jersey mail facility, were identified. Subsequently, we initiated stimulated passive hospital-based and enhanced passive surveillance for anthrax-compatible syndromes. From October 24 to December 17, 2001, hospitals reported 240,160 visits and 7,109 intensive-care unit admissions in the surveillance area (population 6.7 million persons). Following a change of reporting criteria on
November 8, the average of possible inhalational anthrax reports decreased 83% from 18 to 3 per day; the proportion of reports requiring follow-up increased from 37% (105/286) to 41% (47/116). Clinical follow-up was conducted on 214 of 464 possible inhalational anthrax patients and 98 possible cutaneous anthrax patients; 49 had additional laboratory testing. No additional cases were identified. To verify the limited scope of the outbreak, surveillance was essential, though labor-intensive. The flexibility of the system allowed interim evaluation, thus improving surveillance efficiency.
PMID: 12396918 [PubMed - indexed for MEDLINE]

15: Emerg Infect Dis 2002 Oct;8(10):1066-72
Inhalational anthrax outbreak among postal workers, Washington, D.C., 2001.
Dewan PK, Fry AM, Laserson K, Tierney BC, Quinn CP, Hayslett JA, Broyles LN, Shane A, Winthrop KL, Walks I, Siegel L, Hales T, Semenova VA, Romero-Steiner S, Elie C, Khabbaz R, Khan AS, Hajjeh RA, Schuchat A; Washington, D.C., Anthrax Response Team.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA.
In October 2001, four cases of inhalational anthrax occurred in workers in a Washington, D.C., mail facility that processed envelopes containing Bacillus anthracis spores. We reviewed the envelopes' paths and obtained exposure histories and nasal swab cultures from postal workers. Environmental sampling was performed. A sample of employees was assessed for antibody concentrations to B. anthracis protective antigen. Case-patients worked on nonoverlapping shifts throughout the facility, suggesting multiple aerosolization events. Environmental sampling showed diffuse contamination of the facility. Potential workplace exposures were similar for the case-patients and the sample of workers. All nasal swab cultures and serum antibody tests were negative. Available tools could not identify subgroups of employees at higher risk for exposure or disease. Prophylaxis was necessary for all employees. To protect postal workers against bioterrorism, measures to reduce the risk of occupational exposure are necessary.
PMID: 12396917 [PubMed - indexed for MEDLINE]

16: Emerg Infect Dis 2002 Oct;8(10):1056-9
Bioterrorism-related anthrax: international response by the Centers for Disease Control and Prevention.
Polyak CS, Macy JT, Irizarry-De La Cruz M, Lai JE, McAuliffe JF, Popovic T, Pillai SP, Mintz ED; Emergency Operations Center International Team.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA. cpolyak@cdc.gov
After reports of the intentional release of Bacillus anthracis in the United States, epidemiologists, laboratorians, and clinicians around the world were called upon to respond to widespread political and public concerns. To respond to inquiries from other countries regarding anthrax and bioterrorism, the Centers for Disease Control and Prevention established an international team in its Emergency Operations Center. From October 12, 2001, to January 2, 2002, thisteam received 130 requests from 70 countries and 2 territories. Requests
originated from ministries of health, international organizations, and
physicians and included subjects ranging from laboratory procedures and clinical evaluations to assessments of environmental and occupational health risks. The information and technical support provided by the international team helped allay fears, prevent unnecessary antibiotic treatment, and enhance laboratory-based surveillance for bioterrorism events worldwide.
PMID: 12396915 [PubMed - indexed for MEDLINE]

17: Emerg Infect Dis 2002 Oct;8(10):1048-55
Epidemiologic investigations of bioterrorism-related anthrax, New Jersey, 2001.
Greene CM, Reefhuis J, Tan C, Fiore AE, Goldstein S, Beach MJ, Redd SC, Valiante D, Burr G, Buehler J, Pinner RW, Bresnitz E, Bell BP; CDC New Jersey Anthrax Investigation Team. Centers for Desease Control and Prevention. Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA. cqg4@cdc.gov
At least four Bacillus anthracis-containing envelopes destined for New York City and Washington, D.C. were processed at the Trenton Processing and Distribution Center

(PDC) on September 18 and October 9, 2001. When cutaneous anthrax was confirmed in a Trenton postal worker, the PDC was closed. Four cutaneous and two inhalational anthrax cases were identified. Five patients were hospitalized; none died. Four were PDC employees; the others handled or received mail processed there. Onset dates occurred in two clusters following envelope processing at the PDC. The attack rate among the 170 employees present when the B. anthracis-containing letters were sorted on October 9 was 1.2%. Of 137 PDC environmental samples, 57 (42%) were positive. Five (10%) of 50 local post offices each yielded one positive sample. Cutaneous or inhalational anthrax developed in four postal employees at a facility where B. anthracis-containing letters were processed. Cross-contaminated mail or equipment was the likely source of infection in two other case-patients with cutaneous anthrax.
PMID: 12396914 [PubMed - indexed for MEDLINE]

18: Emerg Infect Dis 2002 Oct;8(10):1044-7
Bacillus anthracis aerosolization associated with a contaminated mail sorting machine.
Dull PM, Wilson KE, Kournikakis B, Whitney EA, Boulet CA, Ho JY, Ogston J, Spence MR, McKenzie MM, Phelan MA, Popovic T, Ashford D.
Centers for Disease Control and Prevention, Atlanta, GA, USA. pdull@emory.wdu
On October 12, 2001, two envelopes containing Bacillus anthracis spores passed through a sorting machine in a postal facility in Washington, D.C. When anthrax infection was identified in postal workers 9 days later, the facility was closed. To determine if exposure to airborne B. anthracis spores continued to occur, we performed air sampling around the contaminated sorter. One CFU of B. anthracis was isolated from 990 L of air sampled before the machine was activated. Six CFUs were isolated during machine activation and processing of clean dummy mail. These data indicate that an employee working near this machine might inhale approximately 30 B. anthracis-containing particles during an 8-h
work shift. What risk this may have represented to postal workers is not known, but this estimate is approximately 20-fold less than a previous estimate of sub-5 micro m B. anthracis-containing particles routinely inhaled by asymptomatic, unvaccinated workers in a goat-hair mill.
PMID: 12396913 [PubMed - indexed for MEDLINE]

19: Emerg Infect Dis 2002 Oct;8(10):1019-28
Investigation of bioterrorism-related anthrax, United States, 2001: epidemiologic findings.
Jernigan DB, Raghunathan PL, Bell BP, Brechner R, Bresnitz EA, Butler JC, Cetron M, Cohen M, Doyle T, Fischer M, Greene C, Griffith KS, Guarner J, Hadler JL, Hayslett JA, Meyer R, Petersen LR, Phillips M, Pinner R, Popovic T, Quinn CP, Reefhuis J, Reissman D, Rosenstein N, Schuchat A, Shieh WJ, Siegal L, Swerdlow DL, Tenover FC, Traeger M, Ward JW, Weisfuse I, Wiersma S, Yeskey K, Zaki S, Ashford DA, Perkins BA, Ostroff S, Hughes J, Fleming D, Koplan JP, Gerberding JL; National Anthrax Epidemiologic Investigation Team.
Centers for Disease Control and Prevention, Atlanta, GA 30333, USA. DJernigan@cdc.gov
In October 2001, the first inhalational anthrax case in the United States since 1976 was identified in a media company worker in Florida. A national investigation was initiated to identify additional cases and determine possible exposures to Bacillus anthracis. Surveillance was enhanced through health-care facilities, laboratories, and other means to identify cases, which were defined as clinically compatible illness with laboratory-confirmed B. anthracis infection. From October 4 to November 20, 2001,

22 cases of anthrax (11 inhalational, 11 cutaneous) were identified; 5 of the inhalational cases were fatal. Twenty (91%) case-patients were either mail handlers or were exposed to worksites where contaminated mail was processed or received. B. anthracis isolates from four powder-containing envelopes, 17 specimens from patients, and 106 environmental samples were indistinguishable by molecular subtyping. Illness and death occurred not only at targeted worksites, but also along the path of mail and in other settings. Continued vigilance for cases is needed among health-care providers and members of the public health and law enforcement communities.
PMID: 12396909 [PubMed - indexed for MEDLINE]

20: Emerg Infect Dis 2002 Oct;8(10):1029-34
First case of bioterrorism-related inhalational anthrax in the United States, Palm Beach County, Florida, 2001.
Traeger MS, Wiersma ST, Rosenstein NE, Malecki JM, Shepard CW, Raghunathan PL, Pillai SP, Popovic T, Quinn CP, Meyer RF, Zaki SR, Kumar S, Bruce SM, Sejvar JJ, Dull PM, Tierney BC, Jones JD, Perkins BA; Florida Investigation Team. Centers for Disease Control and Prevention, Atlanta, GA, USA. Marc.Traeger@mail.ihs.gov
On October 4, 2001, we confirmed the first bioterrorism-related anthrax case identified in the United States in a resident of Palm Beach County, Florida. Epidemiologic investigation indicated that exposure occurred at the workplace through intentionally contaminated mail. One additional case of inhalational anthrax was identified from the index patient's workplace. Among 1,076 nasal cultures performed to assess exposure, Bacillus anthracis was isolated from a co-worker later confirmed as being infected, as well as from an asymptomatic mail-handler in the same workplace. Environmental cultures for B. anthracis
showed contamination at the workplace and six county postal facilities. Environmental and nasal swab cultures were useful epidemiologic tools that helped direct the investigation towards the infection source and transmission vehicle. We identified 1,114 persons at risk and offered antimicrobial prophylaxis.
PMID: 12396910 [PubMed - indexed for MEDLINE]

21: Emerg Infect Dis 2002 Oct;8(10):1035-8
First case of bioterrorism-related inhalational anthrax, Florida, 2001: North Carolina investigation.
Maillard JM, Fischer M, McKee KT Jr, Turner LF, Cline JS.
North Carolina Department of Health and Human Service, Rleigh, North Carolina, USA.
The index case of inhalational anthrax in October 2001 was in a man who lived and worked in Florida. However, during the 3 days before illness onset, the patient had traveled through North Carolina, raising the possibility that exposure to Bacillus anthracis spores could have occurred there. The rapid response in North Carolina included surveillance among hospital intensive-care units, microbiology laboratories, medical examiners, and veterinarians, and site investigations at locations visited by the index patient to identify the naturally occurring or bioterrorism-related source of his exposure.
PMID: 12396911 [PubMed - indexed for MEDLINE]

22: Emerg Infect Dis 2002 Oct;8(10):1078-82
Bioterrorism-related anthrax surveillance, Connecticut, September December, 2001.

Williams AA, Parashar UD, Stoica A, Ridzon R, Kirschke DL, Meyer RF, McClellan J, Fischer M, Nelson R, Cartter M, Hadler JL, Jernigan JA, Mast EE, Swerdlow DL; Connecticut Anthrax Investigation Team.
Centers for Desease Control and Prevention, Atlanta, Georgia 30333, USA.
On November 19, 2001, a case of inhalational anthrax was identified in a 94-year-old Connecticut woman, who later died. We conducted intensive surveillance for additional anthrax cases, which included collecting data from hospitals, emergency departments, private practitioners, death certificates, postal facilities, veterinarians, and the state medical examiner. No additional cases of anthrax were identified. The absence of additional anthrax cases argued against an intentional environmental release of Bacillus anthracis in Connecticut and suggested that, if the source of anthrax had been cross-contaminated mail, the risk for anthrax in this setting was very low. This surveillance system provides a model that can be adapted for use in similar emergency settings.
PMID: 12396919 [PubMed - indexed for MEDLINE]

23: Emerg Infect Dis 2002 Oct;8(10):1096-102
Laboratory response to anthrax bioterrorism, New York City, 2001.
Heller MB, Bunning ML, France ME, Niemeyer DM, Peruski L, Naimi T, Talboy PM, Murray PH, Pietz HW, Kornblum J, Oleszko W, Beatrice ST; Joint Microbiological Rapid Response Team.; New York City Anthrax Investigation Working Group. New York city Department of Health, New York, USA.

In October 2001, the greater New York City Metropolitan Area was the scene of a bioterrorism attack. The scale of the public response to this attack was not foreseen and threatened to overwhelm the Bioterrorism Response Laboratory's (BTRL) ability to process and test environmental samples. In a joint effort with the Centers for Disease Control and Prevention and the cooperation of the Department of Defense, a massive effort was launched to maintain and sustain the laboratory response and return test results in a timely fashion. This effort was largely successful. The development and expansion of the facility are described, as are the special needs of a BTRL. The establishment of a Laboratory Bioterrorism Command Center and protocols for sample intake, processing, reporting, security, testing, staffing, and and quality control are also described.
PMID: 12396923 [PubMed - indexed for MEDLINE]

24: Emerg Infect Dis 2002 Oct;8(10):1111-6
Molecular subtyping of Bacillus anthracis and the 2001 bioterrorism-associated anthrax outbreak, United States.
Hoffmaster AR, Fitzgerald CC, Ribot E, Mayer LW, Popovic T.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA.
amh9@cdc.gov
Molecular subtyping of Bacillus anthracis played an important role in differentiating and identifying strains during the 2001 bioterrorism-associated outbreak. Because B. anthracis has a low level of genetic variability, only a few subtyping methods, with varying reliability, exist. We initially used multiple-locus variable-number tandem repeat analysis (MLVA) to subtype 135 B. anthracis isolates associated with the outbreak. All isolates were determined to be of genotype 62, the same as the Ames strain used in laboratories. We sequenced the protective antigen gene (pagA) from 42 representative outbreak isolates and determined they all had a pagA sequence indistinguishable from the

Ames strain (PA genotype I). MLVA and pagA sequencing were also used on DNA from clinical specimens, making subtyping B. anthracis possible without an isolate. Use of high-resolution molecular subtyping determined that all outbreak isolates were indistinguishable by the methods used and probably originated from a single source. In addition, subtyping rapidly identified laboratory contaminants and nonoutbreak-related isolates.
PMID: 12396925 [PubMed - indexed for MEDLINE]

25: Emerg Infect Dis 2002 Oct;8(10):1133-7
Anthrax postexposure prophylaxis in postal workers, Connecticut, 2001.
Williams JL, Noviello SS, Griffith KS, Wurtzel H, Hamborsky J, Perz JF, Williams IT, Hadler JL, Swerdlow DL, Ridzon R.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA. znv8@cdc.gov
After inhalational anthrax was diagnosed in a Connecticut woman on November 20, 2001, postexposure prophylaxis was recommended for postal workers at the regional mail facility serving the patient's area. Although environmental testing at the facility yielded negative results, subsequent testing confirmed the presence of Bacillus anthracis. We distributed questionnaires to 100 randomly selected postal workers within 20 days of initial prophylaxis. Ninety-four workers obtained antibiotics, 68 of whom started postexposure prophylaxis, and of these, 21 discontinued. Postal workers who never started or stopped taking prophylaxis cited as reasons disbelief regarding anthrax exposure, problems with adverse events, and initial reports of negative cultures. Postal workers with adverse events reported predominant symptoms of gastrointestinal distress and headache. The influence of these concerns on adherence suggests that communication about risks of acquiring anthrax, education about adverse events, and careful management of adverse events are essential elements in increasing adherence.
PMID: 12396928 [PubMed - indexed for MEDLINE]

26: Emerg Infect Dis 2002 Oct;8(10):1138-44
Adherence to antimicrobial inhalational anthrax prophylaxis among postal workers, Washington, D.C., 2001.
Jefferds MD, Laserson K, Fry AM, Roy S, Hayslett J, Grummer-Strawn L, Kettel-Khan L, Schuchat A; Centers for Disease Control and Prevention Anthrax Adherence Team.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA. mnj5@cdc.gov
In October 2001, two envelopes containing Bacillus anthracis spores were processed at the Washington, D.C., Processing and Distribution Center of the U.S. Postal Service; inhalational anthrax developed in four workers at this facility. More than 2,000 workers were advised to complete 60 days of postexposure prophylaxis to prevent inhalational anthrax. Interventions to promote adherence were carried out to support workers, and qualitative information was collected to evaluate our interventions. A quantitative survey was administered to a convenience sample of workers to assess factors influencing adherence. No anthrax infections developed in any workers involved in the interventions or interviews. Of 245 workers, 98 (40%) reported full adherence to prophylaxis, and 45 (18%) had completely discontinued it. Anxiety and experiencing adverse effects to prophylaxis, as well as being <45 years old were risk factors for discontinuing prophylaxis. Interventions, especially frequent visits by public health staff, proved effective in supporting adherence.

PMID: 12396929 [PubMed - indexed for MEDLINE]

27: Emerg Infect Dis 2002 Oct;8(10):1152-6
Collaboration between public health and law enforcement: new paradigms and partnerships for bioterrorism planning and response.
Butler JC, Cohen ML, Friedman CR, Scripp RM, Watz CG.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA.
JButler@cdcgov
The biological attacks with powders containing Bacillus anthracis sent through the mail during September and October 2001 led to unprecedented public health and law enforcement investigations, which involved thousands of investigators from federal, state, and local agencies. Following recognition of the first cases of anthrax in Florida in early October 2001, investigators from the Centers for Disease Control and Prevention (CDC) and the Federal Bureau of Investigation (FBI) were mobilized to assist investigators from state and local public health and law enforcement agencies. Although public health and criminal
investigations have been conducted in concert in the past, the response to the anthrax attacks required close collaboration because of the immediate and ongoing threat to public safety. We describe the collaborations between CDC and FBI during the investigation of the 2001 anthrax attacks and highlight the challenges and successes of public health and law enforcement collaborations in general.
PMID: 12396931 [PubMed - indexed for MEDLINE]

28: Emerg Infect Dis 2002 Oct;8(10):1093-5
Coordinated response to reports of possible anthrax contamination, Idaho, 2001.
Tengelsen L, Hudson R, Barnes S, Hahn C.
Idaho Department of Health and Welfare, Boise, Idaho 83720, USA.
Tengelse@idhw.state.id.us
In 2001, the intentional release of anthrax spores in the eastern United Statesincreased concern about exposure to anthrax nationwide, and residents of Idaho sought assistance. Response from state and local agencies was required, increasing the strain on epidemiologists, laboratorians, and communications personnel. In late 2001, Idaho's public health communications system handled 133 calls about suspicious powders. For each call, a multiagency bridge call was established, and participants (public health officials, epidemiologists, police, Federal Bureau of Investigation personnel, hazardous materials officials, and others) determined which samples would be tested by the state public health laboratory. A triage system for calls helped relieve the burden on public safety and health systems.
PMID: 12396922 [PubMed - indexed for MEDLINE]

29: Emerg Infect Dis 2002 Oct;8(10):1088-92
Call-tracking data and the public health response to bioterrorism related anthrax.
Mott JA, Treadwell TA, Hennessy TW, Rosenberg PA, Wolfe MI, Brown CM, Butler JC.
Centers for Desease Control and Prevention , Atlanta, Georgia 30333, USA.
zud9@cdc.gov
After public notification of confirmed cases of bioterrorism-related anthrax, the Centers for Disease Control and Prevention's Emergency Operations Center

responded to 11,063 bioterrorism-related telephone calls from October 8 to November 11, 2001. Most calls were inquiries from the public about anthrax vaccines (58.4%), requests for general information on bioterrorism prevention (14.8%), and use of personal protective equipment (12.0%); 882 telephone calls (8.0%) were referred to the state liaison team for follow-up investigation. Of these, 226 (25.6%) included reports of either illness clinically confirmed to be compatible with anthrax or direct exposure to an environment known to be contaminated with Bacillus anthracis. The remaining 656 (74.4%) included no confirmed illness but reported exposures to "suspicious" packages or substances or the receipt of mail through a contaminated facility. Emergency response staff must handle high call volumes following suspected or actual bioterrorist attacks. Standardized health communication protocols that address contact with unknown substances, handling of suspicious mail, and clinical evaluation of suspected cases would allow more efficient follow-up investigations of clinically compatible cases in high-risk groups.
PMID: 12396921 [PubMed - indexed for MEDLINE]

30: Emerg Med Clin North Am 2002 Nov;20(4):975-93, xii
Biologic and chemical weapons of mass destruction.
Bozeman WP, Dilbero D, Schauben JL.
Department of Emergency Medicine, University of Florida, Shands Jacksonville, 655 West Eighth Street, Jacksonville, FL 32209, USA. william.bozeman@jax.ufl.edu
Weapons of mass destruction (WMDs) are capable of producing massive casualties and are typically grouped into nuclear, biologic, and chemical weapons. In the wake of the September 11th disasters, attention to terrorist groups and the potential for use of WMDs has increased. Biologic and chemical weapons are relatively accessible and inexpensive to develop, and are thought to be the most available to foreign states and subnational terrorist groups. This article reviews various biologic and chemical weapons, including emergency diagnosis and management of selected agents.
Publication Types: Review; Review, Tutorial
PMID: 12476890 [PubMed - indexed for MEDLINE]

31: Expert Opin Biol Ther 2002 Dec;2(8):883-93
Vaccines for Category A bioterrorism diseases.
Lutwick LI, Nierengarten MB.
Infectious Diseases (IIIE), 800 Poly Place, Brooklyn, New York 11209, USA, E-mail: larry.lutwick@med.va.gov. larry.lutwick@med.va.gov2Minneapolis, Minnesota, USA
Vaccination programmes are very successful as a preventive strategy against many infectious diseases which have had a major impact on human morbidity and mortality. One of these diseases, smallpox, has been eliminated as a natural infection. The recent concern about biological attacks has turned attention to the use of an immunisation programme to prevent infection with what are considered the most significant potentially harmful biowarfare pathogens. This review puts into perspective the available information on current immunisation and newer vaccine options for anthrax, smallpox, tularaemia, plague and botulism.
PMID: 12517267 [PubMed - in process]

32: Genome Biol 2002 Oct 25;3(11):comment1015
Comment on: Genome Biol. 2001;2(12):COMMENT1014.
The guards themselves.
Petsko GA.
Rosenstiel Basic Medical Sciences Research Center, Brandeis University, Waltham, MA 02454-9110, USA. petsko@brandeis.edu.
If we agree that, in the present climate of fear of bioterrorism, some restrictions on the conduct and/or publication of certain types of biological research are likely, it is to our advantage to preempt government action by devising for ourselves restrictions that we can live with, then the inevitable question becomes: how should these restrictions be administered?
Publication Types: Comment
PMID: 12429054 [PubMed - indexed for MEDLINE]

33: Hosp Med 2002 Sep;63(9):519
Comment on: Hosp Med. 2002 Sep;63(9):516-8.
Better systems are still needed.
Dance DA.
Public Health Laboratory, Derriford Hospital, Plymouth PL6 8DH.
Publication Types: Comment
PMID: 12357851 [PubMed - indexed for MEDLINE]

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Health services in the detection of and defence against bioterrorism.
Nicoll A.
Public Health Laboratory Service, Communicable Disease Surveillance Centre, London NW9 5DF.
PMID: 12357850 [PubMed - indexed for MEDLINE]

35: Hosp Med 2002 Sep;63(9):516-8
Comment in: Hosp Med. 2002 Sep;63(9):519.
Containing and combatting bioterrorism.
Spencer RC, Lightfoot NF.
Publication Types: Editorial
PMID: 12357849 [PubMed - indexed for MEDLINE]

36: Int Microbiol 2002 Dec;5(4):161-7
Responding to the threat of bioterrorism: a microbial ecology perspective - thecase of anthrax.
Atlas RM.
Department of Biology, University of Louisville, Louisville, KY 40292, USA, r.atlas@louisville.edu
Anthrax is a disease of herbivores caused by the gram-positive bacterium Bacillus anthracis. It can affect cattle, sheep, swine, horses and various species of wildlife. The routes for the spread among wildlife are reviewed. There are three kinds of human anthrax - inhalation, cutaneous, and intestinal anthrax - which differ in their routes of infection and outcomes. In the United States, confirmation of cases is made

by the isolation of B. anthracis and by biochemical tests. Vaccination is not recommended for the general public; civilians who should be vaccinated include those who, in their work places, come
in contact with products potentially contaminated with B. anthracis spores, and people engaged in research or diagnostic activities. After September 11, 2001, there were bioterrorism anthrax attacks in the United States: anthrax-laced letters sent to multiple locations were the source of infectious B. anthracis. The US Postal Service issued recommendations to prevent the danger of hazardous exposure to the bacterium. B. anthracis spores can spread easily and persist for very long times, which makes decontamination of buildings very difficult. Early detection, rapid diagnosis, and well-coordinated public health response are the key to minimizing casualties. The US Government is seeking new ways to deter bioterrorism, including a tighter control of research on infectious agents, even though pathogens such as B. anthracis are widely spread in nature and easy to grow. It is necessary to define the boundary between defensive and offensive biological weapons research. Deterring bioterrorism should not restrict critical
scientific research.
PMID: 12497181 [PubMed - in process]

37: J Am Osteopath Assoc 2002 Dec;102(12):662-4
Curricular and pedagogic questions raised by recent medical education efforts onbioterrorism.
Heun LR.
American Association of Colleges of Osteopathic Medicine, 5550 Friendship Blvd, Ste 310, Chevy Chase, MD 20815-7231, USA. lheun@aacom.org
This article outlines the development of learning materials to educate osteopathic medical students about biological terrorism at the American Association of Colleges of Osteopathic Medicine (AACOM). The author then poses two questions that arose from this and concurrent AACOM projects and new technologic developments in medical education, regarding what colleges of osteopathic medicine teach and how they teach it.
PMID: 12501984 [PubMed - in process]

38: J Am Vet Med Assoc 2002 Oct 1;221(7):951-7
Comment in: J Am Vet Med Assoc. 2002 Dec 1;221(11):1546-7.
Healthy People 2010--new opportunities for veterinary medicine in the 21st century.
Hendrix CM, McClelland CL, Kahn KL, Thompson I, Pence PA.
Department of Pathobiology, College of Veterinary Medicine, Auburn University, AL 36849, USA.
PMID: 12369697 [PubMed - indexed for MEDLINE]

39: J Clin Microbiol 2003 Jan;41(1):1-4
Role of the hospital-based microbiology laboratory in preparation for and response to a bioterrorism event.
Snyder JW.
Department of Pathology, Division of Laboratory Medicine, University of Louisville School of Medicine and Hospital, Louisville, Kentucky.
PMID: 12517818 [PubMed - in process]

40: J Community Health Nurs 2002 Winter;19(4):203-11
Bioterrorism preparedness for local health departments.

Morse A.
Kent State College of Nursing, USA. amorse@schd.org
Bioterrorism preparedness has not traditionally been an everyday concern of local public health departments. The likely first responders to a biological bioterrorism event will be local public health personnel. The events of September 11, 2001, and the anthrax crisis that followed tested the capabilities of the public health system and demonstrated its fragility. Little federal funding has trickled down to local health departments, and they have not been included in planning or training for bioterrorism preparedness. Now local health departments must develop detailed bioterrorism response plans. Effective plans will involve internal assessment of strengths and weaknesses and strategizing with other local community agencies. Our health department is a suburban county agency that serves a population of over 250,000. We have started this self-assessment and planning process. This bioterrorism guide has provided some structure for us and may be helpful for other local health departments as they begin this process.
PMID: 12494741 [PubMed - in process]

41: J Emerg Med Serv JEMS 2002 Dec;27(12):90
First Watch: Bioterrorism Alert System for EMS.
Garza MA.
PMID: 12493998 [PubMed - in process]

42: J Law Med Ethics 2002 Fall;30(3 Suppl):52-6
Legal preparedness for bioterrorism.
Matthews GW, Benjamin G, Mills SP, Parmet W, Misrahi JJ.
Centers for Disease Control and Prevention, Atlanta, Georgia, USA.
Responding to a terrorist biological weapon attack poses new challenges not only for the public health response community but also to the very construct of public health police powers as we know them today. States are debating the merits of revising and updating these powers in order to ensure an effective and legally appropriate response. This article covers three aspects of the policy debate: the experience in one state from a legislative perspective, a discussion from an academic viewpoint, and one example of the role of enhanced powers from the response perspective.
PMID: 12508503 [PubMed - in process]

43: J Okla State Med Assoc 2002 Nov;95(11):725-8
Smallpox in the post-eradication era.
Huycke MM.
Medical Service, Department of Veterans Affairs Medical Center, Oklahoma University Health Sciences Center, Oklahoma City, OK, USA. mark-huycke@oushc.edu
Smallpox is a recently extinct human viral infection for which herd immunity has rapidly waned. The threat of smallpox during a bioterrorist event using caches of virus outside reference repositories would lead to epidemics of great and predictable mortality. The result would be short-term societal chaos. Control of smallpox requires vaccination and quarantine, the same measures that eliminated this disease in the 1970's. Extensive coordination and planning would be needed among the healthcare infrastructure, law enforcement agencies and political leadership for effective responses to this public health threat. Despite this challenge, we must remind ourselves that smallpox transmission and vaccinia effectiveness are

well understood. Strategies that successfully eradicated smallpox 25 years ago, if appropriately implemented again, would undoubtedly lead to its elimination once again.
PMID: 12471737 [PubMed - indexed for MEDLINE]

44: J R Soc Med 2002 Dec;95(12):630
Comment on: J R Soc Med. 2002 Oct;95(10):479-80.
Bioterrorism.
Berrios GE.
Publication Types: Comment; Letter
PMID: 12461158 [PubMed - indexed for MEDLINE]

45: J R Soc Med 2002 Dec;95(12):609-11
Bioterrorism: the current threat.
Durrant GR.
Centre for Research into Environment and Health, University of Wales,
Publication Types: Congresses
Aberystwyth, UK.
PMID: 12461149 [PubMed - indexed for MEDLINE]

46: J Toxicol Clin Toxicol 2002;40(6):803-16
Review of oximes in the antidotal treatment of poisoning by organophosphorusnerve agents.
Kassa J.
Purkyne Military Medical Academy, Hradec Kralove, Czech Republic. kassa@pmfhk.cz
The cholinesterase-inhibiting organophosphorus compounds referred to as nerve agents (soman, sarin, tabun, GF agent, and VX) are particularly toxic and are considered to be among the most dangerous chemical warfare agents. Included in antidotal medical countermeasures are oximes to reactivate the inhibited cholinesterase. Much experimental work has been done to better understand the properties of the oxime antidotal candidates including the currently available pralidoxime and obidoxime, the H oximes HI-6 and Hlo-7, and methoxime. There is and improve survival of animals poisoned with supralethal doses. They appear no single, broad-spectrum oxime suitablefor the antidotal treatment of poisoning with all organophosphorus agents. If more than one oxime is available, the choice depends primarily on the identity of the responsible organophosphorus compound. The H oximes appear to be very promising antidotes against nerveagents because they are able to protect experimental animals from toxic effects more effective against nerve agent poisoning than the currently used oximes pralidoxime and obidoxime, especially in the case of soman poisoning. On the other hand, pralidoxime and especially obidoxime seem sufficiently effective to treat poisonings with organophosphorus insecticides that have relatively less toxicity than nerve agents.
Publication Types: Review; Review, Tutorial
PMID: 12475193 [PubMed - indexed for MEDLINE]

47: JAMA 2002 Dec 11;288(22):2853-8

Secondary aerosolization of viable Bacillus anthracis spores in a contaminated US Senate Office.
Weis CP, Intrepido AJ, Miller AK, Cowin PG, Durno MA, Gebhardt JS, Bull R.
US Environmental Protection Agency National Enforcement Investigations Center, Denver Federal Center, Bldg 53, PO Box 25227, Denver, CO 80225, USA. weis.chris@epa.gov
CONTEXT: Bioterrorist attacks involving letters and mail-handling systems in Washington, DC, resulted in Bacillus anthracis (anthrax) spore contamination in the Hart Senate Office Building and other facilities in the US Capitol's vicinity. OBJECTIVE: To provide information about the nature and extent of indoor secondary aerosolization of B anthracis spores. DESIGN: Stationary and personal air samples, surface dust, and swab samples were collected under semiquiescent (minimal activities) and then simulated active office conditions to estimate secondary aerosolization of B anthracis spores. Nominal size characteristics, airborne concentrations, and surface contamination of B anthracis particles (colony-forming units) were evaluated. RESULTS: Viable B anthracis spores reaerosolized under semiquiescent conditions, with a marked increase in reaerosolization during simulated active office conditions. Increases were observed for B anthracis collected on open sheep blood agar plates (P<.001) and personal air monitors (P =.01) during active office conditions. More than 80% of the B anthracis particles collected on stationary monitors were within an alveolar respirable size range of 0.95 to 3.5 micro m. CONCLUSIONS: Bacillus anthracis spores used in a recent terrorist incident reaerosolized under common office activities. These findings have important implications for appropriate respiratory protection, remediation, and reoccupancy of contaminated office environments.
PMID: 12472327 [PubMed - indexed for MEDLINE]

48: JAMA 2002 Dec 4;288(21):2681-2
From the Centers for Disease Control and Prevention. Use of anthrax vaccine in response to terrorism: supplemental recommendations of the Advisory Committee on Immunization Practices.
Centers for Disease Control and Prevention. Advisory Committee on Immunization Practices.
Publication Types: Guideline; Practice Guideline
PMID: 12476914 [PubMed - indexed for MEDLINE]

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Comment on: JAMA. 2002 Aug 7;288(5):622-8.
Bioterrorism and public health law.
Annas GJ.
Publication Types: Comment; Letter
PMID: 12460084 [PubMed - indexed for MEDLINE]

50: JAMA 2002 Dec 4;288(21):2686; author reply 2686-7
Comment on: JAMA. 2002 Aug 7;288(5):622-8.
Bioterrorism and public health law.
Orient JM.
Publication Types: Comment; Letter
PMID: 12460085 [PubMed - indexed for MEDLINE]

51: Jpn J Infect Dis  2002 Aug;55(4):112-6
Duration of immunity after smallpox vaccination: a study on vaccination policy against smallpox bioterrorism in Japan.
Arita I.
Agency for Cooperation in International Health, Kumamoto 862-0901, Japan. acih@msa.biglobe.ne.jp
The success of global smallpox eradication in 1980 led all the nations of the world to discontinue smallpox vaccination. To date, however, the threat of deliberate release of smallpox virus has led health authorities to reconsider smallpox vaccination and at the same time, to urge to evaluate duration of the immunity of the population vaccinated before 1980. Although available data is scarce and incomplete, the study suggests that protective immunity lasts longer in a good percentage of vaccinees, although the real percentage and duration are not known. Accordingly, how to establish a national vaccination policy for preparedness in Japan and elsewhere was discussed. The study is intended to cause interest and debate among the medical and public health community.
Publication Types: Review; Review, Tutorial
PMID: 12403907 [PubMed - indexed for MEDLINE]

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The reality of the modern bioterrorism response.
Barbera JA, Macintyre AG.
Institute for Crisis, Disaster, and Risk Management, George Washington University, Washington DC, USA. jbarbera@seas.gwu.edu
PMID: 12504495 [PubMed - indexed for MEDLINE]

53: Lancet  2002 Dec;360 Suppl:s35-6
Long-term effects of chemical weapons.
Volans GN, Karalliedde L.
Medical Toxicology Unit, Guy's and St Thomas' Hospital Trust, London, UK. glyn.volans@gstt.sthames.nhs.uk
Publication Types: Review; Review, Tutorial
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US infectious disease research leaders set out new priorities.
Ashraf H.
Publication Types: News
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Bioterrorism treatment information.
Sauri M.
PMID: 12481746 [PubMed - in process]

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Biological agents as weapons 2: anthrax and plague.
Whitby M, Ruff TA, Street AC, Fenner FJ.
Infection Management Services, Princess Alexandra Hospital, Brisbane, QLD.
whitbym@health.qld.gov.au
Although most naturally occurring infections with anthrax and plague are cutaneous, both organisms are most likely to be deliberately disseminated in aerosolised form, resulting in severe pulmonary illness. Mortality from both would be high and rapid in the absence of early and effective treatment, making swift and effective liaison between alert clinicians and public health authorities crucial to an effective response. Differentiating features include mediastinal widening (anthrax) and haemoptysis (plague). Doxycycline and ciprofloxacin are effective agents for prophylaxis and treatment for both diseases. Medical advocacy for strengthening the Biological Weapons Convention, particularly with an enforceable protocol including verification and compliance provisions, is needed.
Publication Types: Review; Review, Tutorial
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Combating bioterrorism. The Brentwood Project.
Smith SM, Smith LG.
St. Michael's Medical Center, Newark, USA.
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US federal bureaucracy hampers progress in countering bioterrorism.
Fox JL.
Publication Types: News
PMID: 12042838 [PubMed - indexed for MEDLINE]

59: Nature 2002 Dec 5;420(6915):450
Europe urged to provide boost for bioterror research.
Abbott A.
Publication Types: News
PMID: 12466800 [PubMed - indexed for MEDLINE]

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Comment on: Nature. 2002 Sep 12;419(6903):99.
DNA committee is model for bioterrorism debate.
Perpich JG.
Publication Types: Comment; Letter
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Preparing for bioterrorism.
PMID: 12162060 [PubMed - indexed for MEDLINE]

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What's the ASC's role for mass casualties?
PMID: 12442657 [PubMed - indexed for MEDLINE]

63: Postgrad Med 2002 Nov;112(5):133-40
Potential agents of chemical warfare. Worst-case scenario protection anddecontamination methods.
Lazarus AA, Devereaux A.
Department of Internal Medicine, National Naval Medical Center, 8901 Wisconsin Ave, Bethesda, MD 20889-5600, USA. aalazarus@bethesda.med.navy.mil
Publication Types: Review; Review Literature
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Breakthrough of the year. Bioterrorism: the calm after the storm.
Enserink M.
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Balancing public health and civil liberties.
Gostin LO, Sapsin JW, Teret SP, Burris S, Mair JS, Hodge JG Jr, Vernick JS.
Publication Types: Comment; Letter
PMID: 12481781 [PubMed - indexed for MEDLINE]

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Smallpox still a danger.
Rhode JG.
Publication Types: Letter
PMID: 12448948 [PubMed - indexed for MEDLINE]

67: US News World Rep 2002 Nov 11;133(18):32
A softer touch. The U.S. is developing weapons that would subdue, but not kill.
Pasternak D.
Publication Types: News
PMID: 12455206 [PubMed - indexed for MEDLINE]

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Preparing for an era of weapons of mass destruction (WMD). Are we there yet? Why we should all be concerned. Part 1.
McFee RB.
In the aftermath of September 11th and autumn 2001, tremendous efforts have been expended to enhance national preparedness to protect against terrorism and weapons of mass destruction (WMD). However there remain significant vulnerabilities across domains, including communications, health care facility preparedness, professional training, interagency collaborations, public health infrastructure, surveillance capabilities, the food supply, the environment and

resource allocation. It is a significant challenge to prepare for an unknown event, without a clear-cut indicator of who to protect and from whom. The daunting tasks of preparing a nation, remedyingyears of under-investment in
public health, and promoting cooperative endeavors among agencies unaccustomed to working together cannot be solved merely by money, brief overview training programs, and quick fixes. None the less, much progress has been made and hope is on the horizon. Although it would seem obvious to include toxicologists in WMD planning, often this is not the case. What role should the poison control and toxicology communities play? What follows is the first of a two-part discussion of our current state of WMD preparedness and the vulnerabilities we must address. Part 2 will examine possible solutions and discuss the critical
leadership role toxicology can play in this important arena.
Publication Types: Editorial
PMID: 12136963 [PubMed - indexed for MEDLINE]